

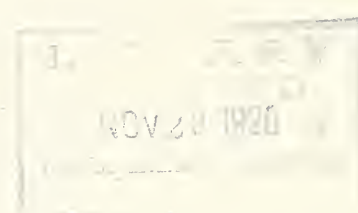
Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



Bi-521
Oct. '20

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY



HINTS ON THE CARE OF PARROTS

It has been said that no other birds become so entirely domesticated and so much attached to their keepers as parrots, and none are so long lived. On the other hand parrots are not without their bad points; many of the species indulge in harsh screaming and most of them injure birds smaller than themselves with which they may be caged. This leaflet is compiled from the works on parrots listed at the end, which should be consulted for more detailed information.

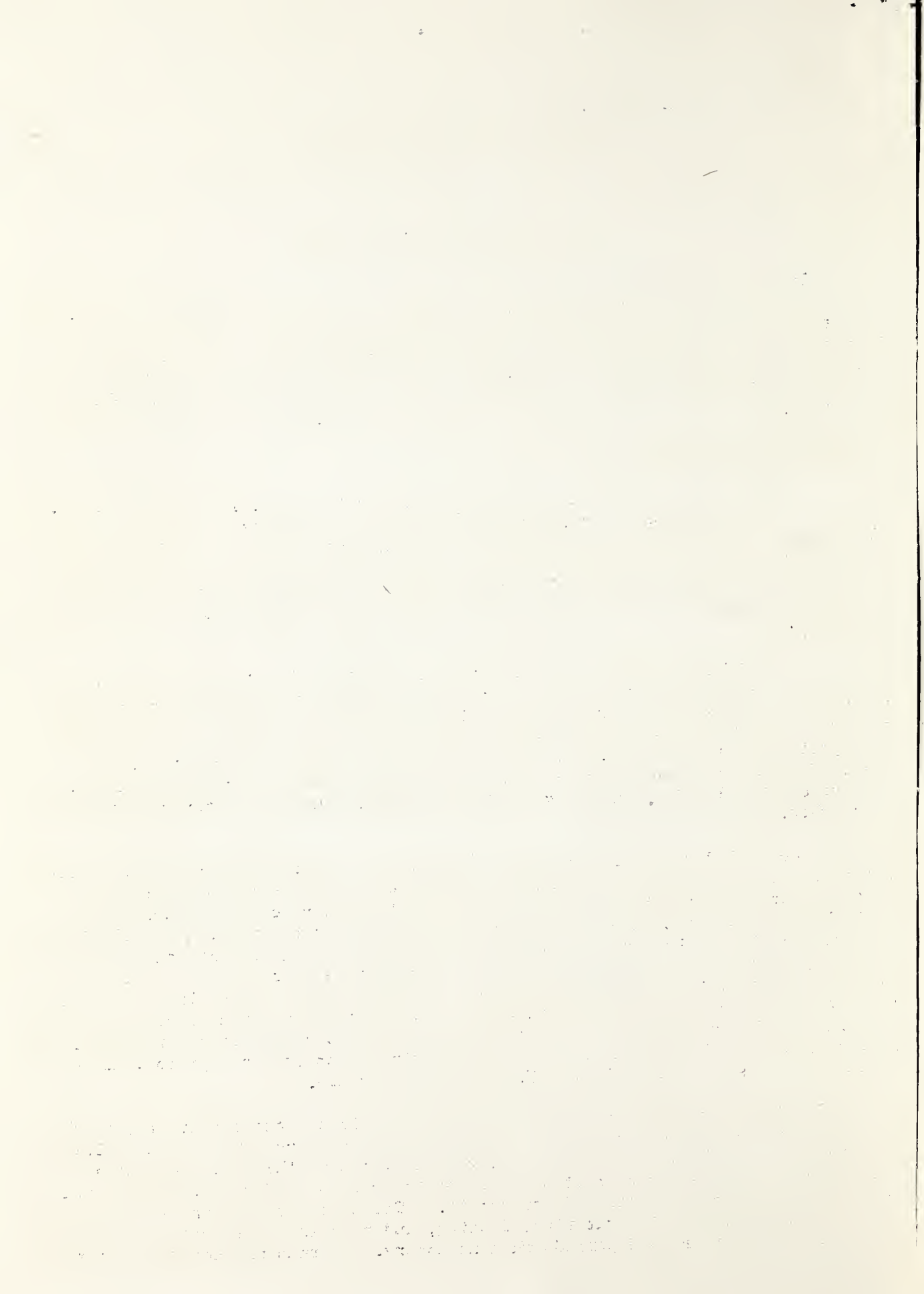
QUARTERS FOR PARROTS

Parrots are tethered to stands, or confined in cages, indoor bird rooms, or in outdoor aviaries. Parrot stands should have wood, not metal, perches with the ends protected by metal caps against the birds' gnawing activities. The tether chain should be light and smooth. Of the various ways of keeping parrots the stand method is the least advisable, but it must be used for such powerful species as the macaws unless cages made of very strong iron rods are available.

Cages for parrots should be roomy (square preferable to round), with plenty of perches of large diameter, standard food and water receptacles, and removable bottom or tray for which zinc is the best material. Parrots tame more rapidly in cages solidly inclosed on three sides; such cages also give more protection from drafts. Clean grit makes a good floor for a cage. Cages of seed eaters should be cleaned weekly and those of soft feeders daily. As part of the cleaning process wash the perches and food and water receptacles thoroughly.

Indoor bird rooms preferably should have a southern exposure and be well-lighted. Birds may be kept in cages therein, or free if not too numerous or of too great diversity in size. An arrangement similar to a storm door is advisable to prevent escape of birds when persons enter the room. Ventilation by screened windows is necessary but drafts must be excluded. Branches of trees supplied for perches and for whittling will tend to reduce damage to exposed woodwork; if it is desired to prevent all such damage the birds must be caged or the wood covered with metal. In any event plenty of comfortable perches must be supplied. If a running supply of water can not be arranged it is better to use shallow pans; the so-called bird fountains are apt to lead to stale or fouled-water supplies, both highly undesirable.

The ideal arrangement for confining parrots is the outdoor aviary, which may be of modest size or as large and elaborate as the purse of the owner will justify. It should have at one side (preferably the north) a glass-fronted house for a cold weather retreat and part of the roof should be solidly covered to furnish shelter for nests and for roosts. The house must be provided with a source of heat, and with watering, feeding, and roosting equipment so that it can be used for protracted periods when necessary. A running supply of water



should grace every outdoor aviary. It is useless to place living plants in an aviary for parrots as they will be cut up and destroyed, but the ground should be well grassed and branches of trees should be put in from time to time for whittling.

SELECTION OF SPECIES

Choice of birds must depend upon the kinds available in the market, but it is well to know what species are considered most desirable from various points of view.

The species best adapted to training as talkers include the following, listed approximately in the order of their ability to learn (indicated by the numbers preceding the common name):

<u>Common name.</u>	<u>Scientific name.</u>	<u>Native country.</u>
1. Grey parrot.	<i>Psittacus erithacus.</i>	Western Africa.
2. Double-fronted Amazon.	<i>Chrysotis leucillanti.</i>	Mexico; Central America.
2. Yellow-naped " .	" <i>auripalliata.</i>	Central America.
2. Blue-fronted " .	" <i>aestiva.</i>	South America.
2. Cuban Parrot.	" <i>leucocephala.</i>	Cuba.
2. Green Conure.	<i>Conurus leucocephalus.</i>	South America.
3. Rose-crested Cockatoo.	<i>Cacatua moluccensis.</i>	Moluccas.
3. Bengal Parakeet.	<i>Palaeornis torquata.</i>	Southeastern Asia.

Birds found to be exceptionally quiet and gentle, but as a rule, not apt in learning, are named in the following list:

<u>Common name.</u>	<u>Scientific name.</u>	<u>Native country.</u>
Petz Conure.	<i>Conurus canicularis.</i>	Central America.
Golden Conure.	<i>Conurus guarouba.</i>	Brazil.
Pileated Parakeet.	<i>Porphyrocephalus spurius.</i>	Australia.
Yellow-naped parakeet.	<i>Barnardius semitorquatus.</i>	Australia.
New Zealand. " .	<i>Cyanoramphus</i>	New Zealand.
	<i>novae-zeelandiae.</i>	
Golden-crowned " .	" <i>auriceps.</i>	New Zealand.

The great beauties of the parrot race include the following:

<u>Common name.</u>	<u>Scientific name.</u>	<u>Native country.</u>
Lories.	Genus <i>Lorius.</i>	Malay Archipelago.
Leadbeater Cockatoo.	<i>Cacatua leadbeateri.</i>	Australia.
Macaws.	Genera <i>Anodorhynchus</i> and <i>Ara.</i>	South America.
Lorikeets.	Genus <i>Trichoglossus.</i>	Southeastern Asia.
White-eared Conure.	<i>Conurus leucotis.</i>	Brazil to Australia.
Golden Conure.	<i>Conurus guarouba.</i>	Brazil.

Cuban Parrot.	Conurus leucocephalus.	Cuba.
King Parakeets	Asprornictus cyanopygus.	Australia.
Broad-tailed Parrakeets.	Genera Barnardius and Platycercus.	"
Blue-bonnet "	Genus Psephotus.	"
Grass parakeets.	Genus Psephenus.	"
Red shining parakeet.	Pyrrhulopsis splendens.	Fiji Islands.

The species most easily bred in confinement is the:

<u>Common name.</u>	<u>Scientific name.</u>	<u>Native country.</u>
Budgerigar.	Melopsittacus undulatus.	Australia.

GENERAL CARE OF PARROTS

It is better to buy parrots in warm weather since there is less danger of chilling them during transportation. Have the bird brought from the store by hand if possible, and in a snug draft-proof box. At destination, place in a three-quarters covered cage in a warm room. Feed upon the same diet the former owner has been giving it, changing gradually, if change is required, to the standard diets recommended herein. Or if the bird is in poor condition its food may be of the softened kinds, as boiled corn, oats, or rice, and a stimulant may be given in the drinking water.

If parrots are kept in cages in living rooms the cages should be warmly covered at night and the rooms not allowed to cool off greatly. Moreover, do not throw the windows open to chilly morning air; let changes in temperature be small and gradual and exclude all drafts. Do not allow the birds to remain in a room being swept, but remove them and bring them back when the air in the room has returned to normal, both as to temperature and dust contents.

Captive birds seem to do better with some companionship of their own kind. These need not necessarily be in the same cage, and in fact, species of any considerable difference in size should not be placed together. Always have water available for both drinking and bathing and keep it fresh. Parrots enjoy sitting in warm summer rains and bathing by rolling about in grass wet thereby.

Logs and blocks of soft or of partially decayed hard wood should be accessible to all confined parrots; the birds must exercise their bills, and they obtain from such pieces also wood fiber which seems to be essential to their digestive economy.

The bills and claws of parrots occasionally become too long, though they will not if conditions permit plenty of climbing and gnawing on wood. In case trimming becomes necessary a nail clipper may be used.

FEEDING

As concerns their methods of feeding, parrots may be considered as of two groups. The lorries, lorikeets, or brush-tongued parrots have radically different food habits from those of the other groups and require correspondingly distinct treatment in captivity. Lorries are active and restless and can hardly be kept except in an aviary; they are aggressive also and each pair should have a roomy compartment to themselves. Their food should be milksop, that is, bread, buns, or cake scalded with boiled milk; figs or dates softened by hot water; fresh fruit, as strawberries, grapes, apples and bananas; boiled rice; and small seeds (canary, hemp, and millet) softened by hot water. Insects, ant eggs and meal worms also may be given.

All other parrots may be fed chiefly on dry seeds. Many parrots have been killed by feeding on soft foods, and an equally great mistake has been made by supposing that with such food the birds require no water. Plenty of good, clear water should always be available. The staple food for all parrots other than the lorries should be clean, well-filled seeds, such as oats, wheat, corn, kafir corn, buckwheat, sunflower, canary, millet, and hemp. The last-named should be used sparingly. The larger seeds in this list are preferable for such birds as cockatoos, macaws, and amazons and the smaller ones for lovebirds and parakeets. All these birds may have as occasional treats, boiled potato, boiled rice, dry bread, and crackers. Nuts such as Brazil nuts, filberts, monkey-nuts, peanuts, and pieces of coconut also may be sparingly used. Green food in season should be freely provided, and it may include such things as chickweed, dandelion, almost any flowers, tufts of grass, and weeds in flower and seed, or chopped turnips, carrots, and the like. Lettuce and cabbage should be given only after wilting, and parsley should be avoided. Fresh fruit in moderation is desirable. Occasionally dried red peppers may be given and it is well to keep cuttle-bone constantly available. Avoid milk, milksop, meats, and sweets; they cause indigestion and feather pulling.

GRIT

Plenty of grit is a necessity to parrots as to other seed-eating birds. Coarse, sharp sand is a good form and it is well to keep a mixture of this, coarse salt, charcoal, and broken oyster shells constantly before the birds.

BREEDING PARROTS

When birds are wanted for breeding do not allow them to get fat. Stimulating foods useful in initiating the breeding impulse include seeds of hemp, flax, and poppy, dried red peppers, such insects as grasshoppers, ant eggs, meal worms, and the yolk of eggs. Single birds not intended for breeding should be given very little of such foods. Cuttle-bone for females assists in egg production. When young are in the nest plenty of boiled corn, oats, and canary seed should be available, and as some female parrots in captivity are not good mothers it is necessary to watch to make sure that the young are being fed.

The best nests for parrots are sections of partially decayed, hollow logs with the natural rotten wood inside which the birds can gnaw into shape. These may be difficult to obtain, however, and acceptable substitutes are nest boxes made of rough weathered boards, of a long shape (and size adapted to the birds concerned), with the entrance hole near the top of one end and the floor sloping

inwardly so that a shallow saucerlike hollow is formed at the farthest point from the entrance. The actual nest cavity for the larger birds often is made from half of a coconut husk, which must be firmly attached. Nests for the smaller species can be readily made from coconut husks. The halves into which these are cut to remove the meat should be firmly wired together, an entrance made in one end and the whole suspended so that the open end is somewhat the higher.

During mating, laying, and incubating the adult birds should be disturbed as little as practicable. As soon as the young can feed themselves, it is desirable to remove them to other quarters; they can then be placed on the regular rations for adults.

TEACHING PARROTS

Male parrots as a rule respond better to teaching than females. Various individual systems of teaching the birds are recommended but the essentials are repetition of the words, phrases, or bars of music, one at a time until learned, and doing this at a time and in such a way that the bird's attention is not diverted to other things. To achieve this end the parrot is sometimes placed in a room by itself and the person teaching the bird stations himself just beyond a door or elsewhere out of sight, or again the bird is taught in a darkened room. No teasing should ever be permitted, for under its discomfort the bird is apt to become a confirmed screamer and lose all susceptibility to training.

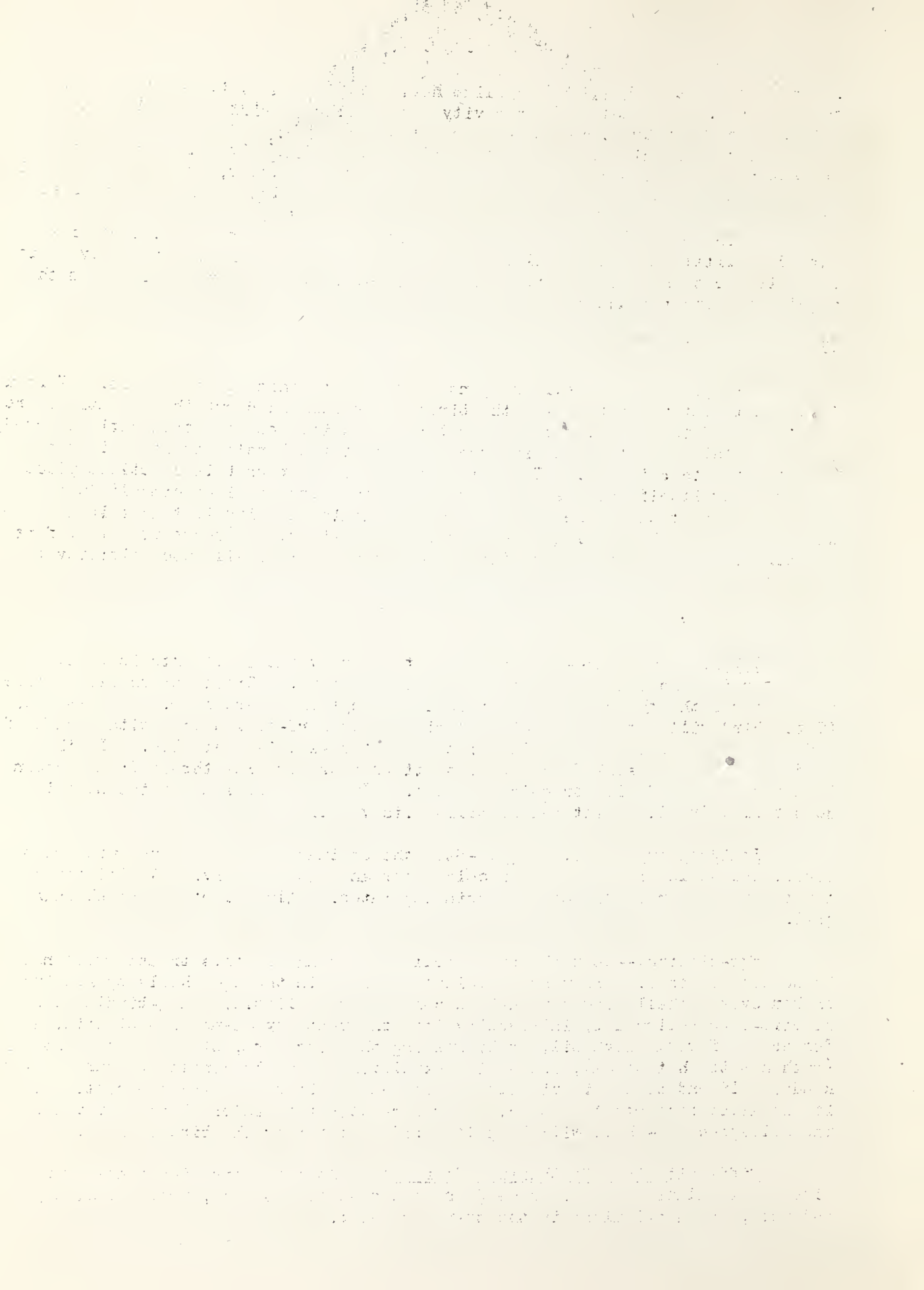
PARROT MALADIES

Colds, Pneumonia:--Prevention of these very fatal ailments is best; banish drafts and all sudden changes in temperature. Treatment should include constant warmth, the cage being wrapped and kept in a warm room, as a kitchen. If the bird will eat readily give it milksop or hard-boiled egg, with a dash of red pepper. A stimulant in the drinking water also is advisable. If the bird does not take soft food, offer to it or pour down its throat from a spoon if necessary tepid milk or chicken broth. If the secretions of the nostrils do not flow freely anoint the nostrils with vaseline.

Indigestion; constipation:--Stop the ordinary diet and give much green stuff, and stale bread soaked in cold water and squeezed dry. Administer carbonate of soda or of magnesia in drinking water. Give plenty of fresh sharp grit.

Egg-binding:--Keep the birds well and strong and this trouble will not be so apt to occur. Prevent deficiency of lime in the egg shells by keeping broken oyster-shells and cuttle-bone constantly available. Egg-binding can sometimes be relieved by introducing into the vent, by means of a pipette, a few drops of warm olive oil, or by keeping the bird warm, steaming the vent (with not too hot steam), and aiding expulsion of egg by gentle pressure of the hands. If end of egg is visible or becomes so after steaming the vent, prick it and allow contents to escape, being careful not to injure border of vent. The collapsed egg-shell will be gotten rid of later by the bird unaided.

Difficulty in refeathering after molt:--Keep the bird constantly warm, give it stimulating foods, as hemp and poppy seed, ant eggs, meal worms, apples, and nuts, and a stimulant in the drinking water.



Feather pulling .-- This distressing habit is brought about by various causes and the treatment must vary according to the basic trouble. Irritation of the skin following indigestion is one cause. Treat as recommended in the paragraph on indigestion. Feather pulling may be due to lice, in which event dust pyrethrum powder through the feathers to the skin of the bird at intervals until all the parasites are killed, and thoroughly sterilize the cage or other quarters. Feather pulling again may be due simply to ennui. In this case give the bird more freedom; if a caged bird, put it in a warm attic room where there are plenty of beams on which it can exercise its beak; or if this is impossible give it sections of branches of a soft wood and a number of stones or other hard objects to play with. If none of these devices is successful in breaking up the habit place on the bird a collar of pasteboard just large enough to slip over the head. While this preventive is in use, try to improve the bird's conditions of life so that it will have something better than feather pulling to do, and will be so satisfied and healthy that return to the bad practice will be very unlikely.

PUBLICATIONS ON PARROTS

ARTHUR, C. P.

Budgerigars and Cockateels, Pamphlet, 34 pages, 1919.

F. Carl, 154 Fleet St., London, E. C. 4, England.

BECHSTEIN, J. M.

Cage and Chamber Birds, Translated by H. G. Adams. One volume, 500 pages, colored plates. 1900.

George Bell and Sons, York St., Covent Garden, London, England.

BISHOP, HENRY.

Treatise on Birds and Aquaria, Pamphlet, 101 pages, 1911.

Henry Bishop, 12 North Front St., Baltimore, Md.

BLAKSTON, W. A., W. SWAYSLAND, and AUGUST F. WIENER.

The Illustrated Book of Canaries and Cage Birds. One Volume, 448 pages, colored plates, 1901.

Cassell and Co. Ltd., Ludgate Hill, London, E. C., England.

BUTLER, A. G.

Hints on Cage-birds (British and Foreign). One volume 80 pages, 1903.

Foreign Birds for Cage and Aviary. Two volumes, 205 and 304 pages, colored plates. 1915.

The Feathered World, 9 Arundel St., Strand, London, W. C., England.

GREEN, W. T.

Parrots in Captivity. Three volumes, 144, 111 and 144 pages, colored plates, 1915.

George Bell and Sons, York St., Covent Garden, London, England.

HOLDEN, GEORGE H.

New Book on Birds, Pamphlet, 158 pages, 1919.

George H. Holden, 300 Fifth Ave., New York City.

PAGE, CHARLES NASH.

Parrots and Other Talking Birds. One volume, 128 pages.

1903.

C. N. Page, Des Moines, Iowa.

SETH-SMITH, DAVID.

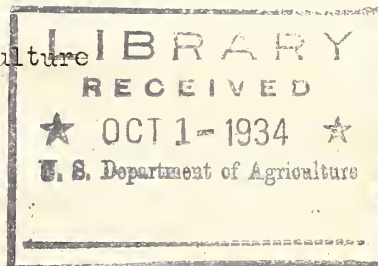
Parakeets: A Handbook to the Imported Species. One volume,

281 pages, colored plates, 1903.

R. H. Porter, 7 Prince's St., Cavendish Square, W.,
London, England.

Bi-521
Sept. 1934

United States Department of Agriculture
Bureau of Biological Survey



HINTS ON THE CARE OF PARROTS

1.9
8527

It has been said that no other birds become so entirely domesticated and so much attached to their keepers as parrots, and none are so long lived. On the other hand parrots are not without their bad points--they are subject to a dangerous disease transmissible to humans (see p. 7); many species indulge in harsh screaming; and most of them injure smaller birds with which they may be caged. This leaflet is compiled from the works on parrots listed at the end, which should be consulted for more detailed information.

QUARTERS FOR PARROTS

Parrots may be tethered to stands, or confined in cages, indoor bird rooms, or in outdoor aviaries. Parrot stands should have wood, not metal, perches with the ends protected by metal caps against the birds' gnawing activities. The tether chain should be light and smooth. Of the various ways of keeping parrots the stand method is the least advisable, but it must be used for such powerful species as the macaws, unless cages made of very strong iron rods are available.

Cages for parrots should be roomy (square preferable to round), with plenty of perches of large diameter, standard food and water receptacles, and removable bottom or tray, for which zinc is the best material. Parrots tame more rapidly in cages solidly enclosed on three sides; such cages also give more protection from drafts. An abundance of clean grit makes a good floor covering for a cage. Cages of seed eaters should be cleaned weekly and those of soft feeders daily. As part of the cleaning process, the perches and the food and water receptacles should be scrubbed thoroughly.

Indoor bird rooms preferably should have a southern exposure and be well lighted. Birds may be kept in cages therein, or free if not too numerous or of too great diversity in size. An arrangement similar to a storm door or a very low door is advisable to prevent escape of birds when persons enter the room. Ventilation by screened windows is necessary, but drafts must be prevented. Branches of trees supplied for perches and for whittling will tend to reduce damage to exposed woodwork; if it is desired to prevent all such damage, the birds must be caged or the wood covered with metal. In any event plenty of comfortable perches must be supplied, and they should not be placed close to the sides of the aviary. If a running supply of water cannot be arranged it is better to use shallow pans; the so-called bird fountains are likely to lead to a stale water supply or to fouling of the water by droppings, etc., either being highly objectionable.

The ideal arrangement for confining parrots is the outdoor aviary, which may be of modest size or as large and elaborate as the purse of the owner will justify. It should have at one side (preferably the north) a glass-fronted house for a cold weather retreat, and part of the top should be solidly roofed to shelter nests and roosts from sun and rain. In choosing wire netting for the aviary, those with soldered joints should not be used, as the parrots detach and swallow the solder for grit and are poisoned thereby. Likewise the use of paints or varnish in the cage or aviary should be avoided. Wood portions may be dressed with creosote if desired. The house should be provided with a source of heat, and with watering, feeding, and roosting equipment so that it can be used for protracted periods when necessary. If the outdoor aviary is not a removable one, the floor should be of cement, brick, or some permanent material susceptible of thorough cleansing. A running supply of water should grace every outdoor structure. It is useless to place living plants in an aviary, as they will be cut up and destroyed, but the ground of movable aviaries should be well grassed, and branches of trees should be put in from time to time for whittling. Twigs with bark of nonpoisonous deciduous trees, such as elm, ash, hickory, or oak, are desirable for this purpose.

SELECTION OF SPECIES

Choice of birds must depend upon the kinds available in the market, but it is well to know what species are considered most desirable from various points of view.

The species best adapted to training as talkers include the following listed approximately in the order of their ability to learn (indicated by the numbers preceding the common name):

<u>Common name</u>	<u>Scientific name</u>	<u>Native country</u>
1. Gray Parrot.....	Psittacus erithacus.....	Western Africa.
2. Levaillant's Amazon.....	Amazona cratrix.....	Mexico; Central America.
2. Yellow-naped Amazon.....	Amazona auropalliata....	Central America.
2. Blue-fronted Amazon.....	Amazona aestiva.....	South America.
2. Cuban Amazon.....	Amazona leucocephala....	Cuba.
2. Green Conure.....	Aratinga leucophthalma..	South America.
3. Rose-crested Cockatoo.....	Kakatoe moluccensis.....	Moluccas.
3. Indian Ringnecked Parrakeet	Psittacula torquata.....	Southeastern Asia.

Birds found to be exceptionally quiet and gentle, but as a rule, not apt in learning, are named in the following list:

<u>Common name</u>	<u>Scientific name</u>	<u>Native country</u>
Petz Conure.....	Eupsittula canicularis..	Mexico; Central America.
Golden Conure.....	Aratinga guarouba.....	Brazil.
Pileated Parrakeet.....	Purpureicephalus spurius	Australia.
Yellow-naped Parrakeet.....	Barnardius semitorquatus	Australia.
New Zealand Parrakeet.....	Cyanoramphus	New Zealand.
	novaezelandiae.	
Golden-crowned Parrakeet.....	Cyanoramphus auriceps...	New Zealand.
Love Birds.....	Genus Agapornis.....	Africa.

The great beauties of the parrot family include the following:

<u>Common name</u>	<u>Scientific name</u>	<u>Native country</u>
Lories.....	Genera Chalcopsittacus, Domicella, and Eos.	Malay Archipelago.
Leadbeater Cockatoo.....	Lophochroa leadbeateri.....	Australia.
Macaws.....	Genera Anodorhynchus, Ara, and Cyanopsittacus.	South America.
Lorikeets.....	Genera Glossopsittacus, Hypocharmosyna, Psitteuteles, and Trichoglossus.	Southeastern Asia to Australia.
White-eared Conure.....	Pyrrhura leucotis.....	Brazil.
Golden, or Queen of Bavaria, Conure	Aratinga guarouba.....	Brazil.
Cuban Amazon.....	Amazona leucocephala.....	Cuba.
King Parrakeet.....	Alisterus scapularis.....	Australia.
Larger Broad-tailed Parrakeets.....	Genera Barnardius, Platycercus, and Purpureicephalus.	Australia.
Smaller Broad-tailed Parrakeets....	Genera Northiella, Psephotellus, and Psephotus.	Australia.
Grass Parrakeets.....	Genera Melopsittacus, Neonodes, Neopsephotus, and Neophema.	Australia.
Red Shining Parrakeet.....	Pyrrhulopsis splendens.....	Fiji Islands.

The species most easily bred in confinement are:

<u>Common name</u>	<u>Scientific name</u>	<u>Native country</u>
Budgerigar.....	Melopsittacus undulatus....	Australia.
Lovebirds.....	Genus Agapornis.....	Africa.

GENERAL CARE OF PARROTS

It is better to buy parrots in warm weather, since there is then less danger of chilling them during transportation. Have the bird brought from the store by hand if possible, and in a snug draft-proof box. At destination, place in a three-quarters covered cage in a warm room. Feed the bird the same diet the former owner has been giving it, changing gradually, if change is required, to the standard diets recommended herein. Or, if the bird is in poor condition, its food for a time may be of the softened kinds, as boiled corn, oats, or rice, and a stimulant may be given in the drinking water.

If parrots are kept in cages in living rooms the cages should be warmly covered at night and the rooms not allowed to cool off greatly. Moreover, do not throw the windows open to chilly morning air; let changes in temperature be small and gradual, and exclude all drafts. Do not allow the birds to remain in a room being swept, but remove them and bring them back when the air in the room has returned to normal, both as to temperature and dust content.

Captive birds seem to do better with some companionship of their own kind. These need not necessarily be in the same cage, and in fact, species of any considerable difference in size should not be placed together. Always have water available for both drinking and bathing, and keep it fresh. Parrots enjoy sitting in warm summer rains and bathing by rolling about in grass wet thereby, or by flying through or brushing against dripping foliage.

Logs and blocks of soft or of partially decayed hard wood should be accessible to all confined parrots; the birds must exercise their bills, and they obtain from such pieces also wood fiber which seems to be essential in their digestive economy.

The bills and claws of parrots occasionally become too long, though they will not if conditions permit plenty of climbing and gnawing on wood. In case trimming becomes necessary a nail clipper may be used.

Captive birds should always be approached slowly and quietly and if possible from the same direction. They should not be frightened by sudden motions, loud noises, or brilliantly-colored clothes.

FEEDING

As concerns their methods of feeding, parrots may be considered as of two groups. The lorries, lorikeets, or brush-tongued parrots have radically different food habits from those of the other group and require correspondingly distinct treatment in captivity. Lories are active and restless and can hardly be kept except in an aviary; they are aggressive also and each pair should have a roomy compartment to themselves. Their food should be milksop (that is, bread, buns, or cake scalded with boiled milk); figs or dates softened by hot water; fresh fruit, as strawberries, grapes, apples, and bananas; boiled rice; and small seeds (canary, hemp, and millet) softened by hot water. Insects, ant eggs, and mealworms also may be given.

All other parrots may be fed chiefly on dry seeds. Many parrots have been killed by feeding on soft foods, and an equally great mistake has been made by supposing that with such food the birds require no water. Plenty of good, clear water should always be available. The staple food for all parrots other than the lorries should be clean, well-filled seeds, such as oats, wheat, corn, kafir corn, buckwheat, sunflower, canary, millet, and hemp. The last-named should be used sparingly. The larger seeds in this list are preferable for such birds as cockatoos, macaws, and amazons and the smaller ones for love-birds and parrakeets. All these birds may have as occasional treats, boiled potato, boiled rice, dry bread, and crackers. Nuts such as Brazil nuts, filberts, cashews, peanuts, and pieces of coconut also may be sparingly used. Green food in season should be freely provided, and it may include such things as chickweed, dandelion, almost any flower, tufts of grass, and weeds in flower and seed, or chopped turnips, carrots, and the like. Lettuce and cabbage should be given only after wilting, and parsley should be avoided. Fresh fruit in moderation is desirable. Occasionally dried red peppers may be given, and it is well to keep cuttle-bone constantly available. Avoid milk, milksop, meats, and sweets; they cause indigestion and subsequently, feather pulling.

GRIT

Plenty of grit is a necessity to parrots as to other seed-eating birds. Coarse sharp sand is a good form, and it is well to keep a mixture of this, coarse salt, charcoal, and broken oyster shells constantly before the birds.

BREEDING PARROTS

When birds are wanted for breeding do not allow them to get fat, and encourage exercise by transferring to larger cages or to flight cages. Stimulating foods useful in initiating the breeding impulse include seeds of hemp, flax, and poppy, dried red pepper, such insects as grasshoppers, ant eggs, mealworms, and the yolk of eggs. Single birds not intended for breeding should be given very little of such foods. Cuttle-bone for females assists in egg production. When young are in the nest plenty of boiled corn, oats, and canary seed should be available, and as some female parrots in captivity are not good mothers it is necessary to watch to make sure that the young are being fed.

The best nests for parrots are sections of partially decayed, hollow logs with the natural rotten wood inside which the birds can gnaw into shape. These may be difficult to obtain, however, and acceptable substitutes are nest boxes made of rough weathered boards, of a long shape (and size adapted to the birds concerned), with the entrance hole near the top of one end and the floor sloping inwardly so that a shallow saucerlike hollow is formed at the farthest point from the entrance. The actual nest cavity for the larger birds often is made from half of a coconut husk, which must be firmly attached. Nests for the smaller species can be readily made from coconut husks. The halves into which these are cut to remove the nut should be firmly wired together, an entrance made in one end and the whole suspended so that the open end is somewhat the higher. When breeding several pairs of budgerigars together in an aviary, always furnish at least as many nest boxes as there are individuals.

During mating, laying, and incubating the adult birds should be disturbed as little as practicable. As soon as the young can feed themselves, it is desirable to remove them to other quarters; they can then be placed on the regular rations for adults.

TEACHING PARROTS

Male parrots as a rule respond better to teaching than females. Various individual systems of teaching the birds are recommended, but the essentials are repetition of the words, phrases, or bars of music, one at a time until learned, and doing this at a time and in such a way that the bird's attention is not diverted to other things. To achieve this end the parrot is sometimes placed in a room by itself and the person teaching the bird stations himself just beyond the door or elsewhere out of sight, or again the bird is taught in a darkened room. No teasing should ever be permitted, for under its discomfort the bird is apt to become a confirmed screamer and lose all susceptibility to training. In case a bird becomes silent a dose of one grain to the ounce of drinking water of citrate of iron and quinine or citrate of iron and ammonia may be efficacious in causing it to talk again.

PARROT MALADIES

Colds; pneumonia.--Prevention of these very often fatal ailments is best; banish drafts and all sudden changes in temperature and diet. Treatment should include constant warmth, the cage being wrapped and kept in a warm room, as a kitchen. If the bird will eat readily give it milksop or hard-boiled egg, with a dash of pepper. A stimulant in the drinking water also is advisable. If the bird does not take soft food, offer to it or pour down its throat from a spoon if necessary tepid milk or chicken broth. If the secretions of the nostrils do not flow freely anoint the nostrils with vaseline.

Indigestion; constipation.--Stop the ordinary diet and give much green stuff, and stale bread soaked in cold water and squeeze dry. Administer carbonate of soda or of magnesia in drinking water. Give plenty of fresh sharp grit.

Egg-binding.--Keep the birds well and strong and encourage them to fly and exercise their wings and this trouble will not be so apt to occur. Prevent deficiency of lime in the egg shells by keeping broken oyster-shells and cuttle-bone constantly available. Egg-binding can sometimes be relieved by introducing into the vent, by means of a pipette, a few drops of warm olive oil, or by keeping the bird warm, steaming the vent (with not too hot steam), and aiding expulsion of egg by gentle pressure of the hands. If end of egg is visible or becomes so after steaming the vent, prick it and allow contents to escape, being careful not to injure border of vent. The collapsed egg-shell will be gotten rid of later by the bird unaided.

Difficulty in refeathering after molt.--Keep the bird constantly warm, give it stimulating foods, as hemp and poppy seed, ant eggs, mealworms, apples, and nuts, and a stimulant in the drinking water.

Feather pulling.--This distressing habit is brought about by various causes, and the treatment must vary according to the basic trouble. Irritation of the skin following indigestion is one cause. Treat as recommended in the paragraph on indigestion. A diet deficient in some items is a frequent cause of feather pulling and may be remedied by giving oily seeds, such as hemp, by adding a few drops of cod-liver oil to the seed ration, or by feeding buttered bread or an egg not quite hard-boiled, and, for a time, an abundance of green foods and fruits. Feather pulling may be due to lack of facilities for bathing, or to lice. In the latter event dust pyrethrum powder through the feathers to the skin of the bird at intervals until all the parasites are killed, and thoroughly sterilize the cage or other quarters and contents. Feather pulling again may be due simply to ennui. In this case give the bird more freedom; if a caged bird, put it in a warm attic room where there are plenty of beams on which it can exercise its beak; or if this is impossible give it sections of branches of a soft wood with bark and a number of stones or other hard objects to play with. If none of these devices is successful in breaking up the habit place on the bird a collar of pasteboard just large enough to slip over the head. While this preventive is in use, try to improve the bird's conditions of life so that it will have something better than feather pulling to do, and will be so satisfied and healthy that return to the bad practice will be unlikely.

Sore feet.-- This is an annoying trouble, commonly met with among caged birds kept in such close confinement that the perches are quickly fouled. If birds are given ample space for exercise and plenty of opportunity to bathe, and if the perches are kept clean, sore feet should not appear. Treatment consists in daily bathing of the feet in warm water and careful drying, followed by anointing with vaseline or a similar bland lubricant. If the feet are seriously inflamed it may be necessary after bathing to paint with a tincture of opium.

PSITTACOSIS (Parrot Fever)

During the last few years psittacosis, a serious disease of cage birds that is transmissible to human beings, has been brought to the attention of American bird lovers and the general public. Parrots and related birds are usually the source of infection, and hence the malady is commonly called parrot fever. Canaries and other species, however, have been known to carry the disease to man. The disease is carried by a minute organism--a filtrable virus--which is invisible even with the most powerful microscope. Even without actually handling infected birds, it is possible to contract the disease--from feathers, discharges, or floating air-borne particles of dust coming from diseased birds or their cages.

The incubation period -- that is, from time of exposure to actual development of clinical symptoms--is normally 6 to 15 days in man, but in some instances it may be much longer. The symptoms are often confused with those of influenza and paratyphoid. The disease among older individuals is frequently fatal, but children and young adults tend to have lighter attacks. Experiments with a vaccine for immunizing against the disease are now being conducted by investigators with a view to protecting bird handlers and others coming in close contact with infected cage birds.

There is no known effective treatment for birds affected with the disease, and these should be killed and burned because of the danger to human beings. Outbreaks of the disease can be checked, however, by destroying the sick birds, isolating those that have been exposed, and taking all sanitary precautions.

PUBLICATIONS ON PARROTS

American Books

Bishop, Henry

Treatise on birds and aquaria, pamphlet, 101 pages, 1911. Fleet-McGinley Co., Baltimore, Md.

Borini, H. L.

The modern food guide for cage-birds. 64 p., illus., 1928. Atlantic Bird Palace, 329 Crescent Street, Brooklyn, N.Y.

Crandall, Lee S.

Pets and how to care for them. 303 p., illus., 1921. New York Zoological Park, New York, N.Y.

Fogg, H., and N. M. Fogg

Revised encyclopedia of caged birds, canaries, parrakeets, finches, mules and hybrids. 144 p., illus., rev. ed., 1928. Audubon Publishing Co., Louisville Hotel, Louisville, Ky.

Glick, C. B.

Parrakeet breeding for profit and other aviary birds. 55 p., illus., 1931. Published by the author, North Hollywood, Calif.

Holden, G. H.

New book on birds. 158 p., illus., 1919. Published by the author, 300 Fifth Avenue, New York, N.Y.

Page, Charles Nash

Parrots and other talking birds. 128 p., 1906. Published by the author, Des Moines, Iowa.

Foreign Books

The following are published by "Cage Birds," Dorset House, Stamford Street, London, S. E., 1, England:

Anonymous.

Colour breeding in budgerigars.

Arthur, C. P.

Budgerigars and cockatiels: How to keep, feed, and breed them. With some additional notes by Wesley T. Page, Allen Silver, and W. Laskey. Rev. ed., 60 p., illus.

Arthur, C. P., and Frank Finn.

Parrots for pleasure and profit: Their breeding and management. Rev. ed., 36 p., illus., 1927.

Greene, W. T.

The grey parrot and how to manage it, with a new chapter on disease by Henry Gray. 5th ed., rev., 71 p., 1927.

Morse, Richard

Wild plants and seeds for birds: An illustrated dictionary of the best foods for use in the aviary. 110 p., illus., 1926.

Norman, H.

Aviaries, bird rooms, and cages. 112 p., illus., 1919.

Nutshell Series of Popular Handbooks:

6. Ailing cage birds and how to cure them; 9. Disinfection of bird rooms and cages; 17. Grey parrots; 18. Budgerigar; 33. Cage and bird room appliances.

Russ, Karl

The budgerigar: Its natural history, breeding and management. 7th ed. Revised and enlarged by Karl Neunzig, translated by M. Burgers. xi + 142 p., 37 illus., 2 pls. (1 col.), 1927.

St. John, Claude

Bird ailments and accidents, with a glossary of terms commonly used by fanciers. 106 p., 1919.

Tavistock, Marquess of
Parrots and parrot-like birds in aviculture. One vol., 298 p., 8 col.
pls., 1929.

Weston, Denys

The budgerigar in captivity: A treatise dealing with the housing,
feeding, breeding, colony production and education of this popular
cage bird. 75 p., illus., 1932.

The following are handled by "The Feathered World," Talbot House, 9 Arundel
Street, Strand, London, W. C. 2, England:

Bowman, F., and R. Morse

Wild foods for birds and how to get them. 61 p., illus.

Butler, A. G.

Foreign birds for cage and aviary. Part 2, 304 p., illus. (1 col. pl.),
1914.

How to sex cage birds (British and foreign). 176 p., illus. (4 col. pls.),
1907.

The grey parrot: How to keep it healthy, and notes on how to distinguish
the sexes. 28 p., illus.

Finn, Frank

Hints on budgerigars. Illus.

The budgerigar. 16 p., 1 fig., 1929(?).

The following are published as indicated:

Anonymous ["Ornito"]

Perruches et perroquets: Méthode d' élevage basée sur l'Expérience. 19 p.
Published by Les Presses Tilbury, Brussels, Belgium.

Avicultural Society.

Aviculture, a treatise on the management of foreign and British birds
in captivity. Vol. I, 1-326 16 p., 26 pls. (10 col.), 1925;
vol. II, xii + 327-551 + 16 p., 48 pls. (15 col.), 1931; vol. III,
x + 552-778 + 16 p., 44 pls. (7 col.), 1931. Stephen Austin & Sons
(Ltd.), 1 Fore Street, Hertford, Herts, England.

Bechstein, J. M.

Cage and chamber birds. (Translated by H. G. Adams.) 500 p., illus.,
1905. G. Bell and Sons, London, England.

Blakston, W. A., W. Swaysland, and August F. Wiener

The illustrated book of canaries and cage birds. 448 p., illus.,
(55 col. pls.), 1901. Cassell and Co. Ltd., Ludgate Hill, London,
E.C., England.

Duncker, H.

Colour breeding in budgerigars. 16 p., 2 col. pls., 1928.

Colour strains in budgerigars. Illus. (col.), 1930(?).

Published by "The Budgerigar Society," and may be obtained from the
secretary, H. C. Humphries, 29 Pearfield Road, Forest Hill, London,
S. E., 23, England.

Greene, W. T.

Parrots in captivity. Vol. 1, 144 p.; vol. 2, 114 p.; vol. 3, 144 p.; illus. (colored plates), 1915. George Bell and Sons, York St., Covent Garden, London, England.

Humphries, H. C.

Budgerigars for beginners. 32 p. Cage Bird Fancy, 7, Milford Lane, London, W.C., 2, England.

Neunzig, Karl

Dr. Karl Russ's Handbuch für Vögel Liebhaber Vögelzüchter und Vögelhändler. Part I. Foreign birds. v + 895 p., illus. (col. pls.), 1921. Creutz'sche Verlagsbuchhandlung, Magdeburg, Germany.

Seth-Smith, David

Parrakeets: A handbook to the imported species. 295 p., illus. (col. pls.), 1926. Bernard Quaritch, Ltd., 11, Grafton Street, New Bond Street, London, W. 1, England.

Walsh, Jeffrey

Budgerigars: Their breeding, exhibiting and general management: with special article on taming, training and teaching to talk. 60 p., illus. Cage Bird Fancy, 7, Milford Lane, London, W.C., 2, England.

American Periodicals

American Canary and Cage-bird Life. Published monthly by the Nicodemus Publishing Co., 5014 North Kedvale Avenue, Chicago, Ill.

Cage Bird World. Published monthly at Baltimore, Md.

The Pet Dealer. Published monthly by the Pet Dealer Publishing Co., Room 2025, 15 Park Row, New York, N.Y.

The Pet Shop. Published monthly by the Pet Shop Publishing Co., 711 Sixth Avenue, New York, N.Y.

Foreign Periodicals

Avicultural Magazine. Published monthly by Stephen Austin & Sons, (Ltd.), 1 Fore Street, Hertford, Herts, England.

The Budgerigar Bulletin. Published quarterly by the Budgerigar Society, 29 Pearfield Road, Forest Hill, London, S.E. 23, England.

Cage Birds and Bird World. Published weekly by F. Carl, Dorset House, Stamford Street, London, S. E. 1, England.

Cage Bird Fancy. Published weekly by Geo. F. Crawford, 7 Milford Lane, Strand, London, W.C. 2, England.

Die Gefiederte Welt. Zeitschrift für Vögel Liebhaber, edited by Dr. Karl Russ, published monthly by Karl Neunzig. Box 148, Magdeburg, Germany.